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USPMS: Urban Sound Pollution Mitigation System

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Abstract: *Urban life is now increasingly dominated by rich and excessive soundscapes in the urban environment, creating important challenges to urban sustainability, human health, and well-being.Owing to a steep rise in urban population, there has been a continuous growth in ctruction of buildings, public or private transport like cars, motorbikes, trains, and planes at a global level. Hence, urban noise has become a major issue affecting the health and quality of human life.*
This paper is a systematic review of the literature on urban sound analysis and mitigation systems. It ventures into methods of describing and investigating urban soundscapes, such as sophisticated sensor technologies, acoustic modeling, and machine learning methods for sound event detection and classification. A variety of conventional sound absorbing materials are being used to reduce noise, but attenuation of low-frequency noise still remains a challenge.

Keywords: Urban Sound Analysis, Noise Reduction, Smart Cities, Acoustic Monitoring, Soundscape, Noise Pollution, Urban Noise, Low-frequency Noise, Indoor Noise, Traffic Noise , Urban Planning

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